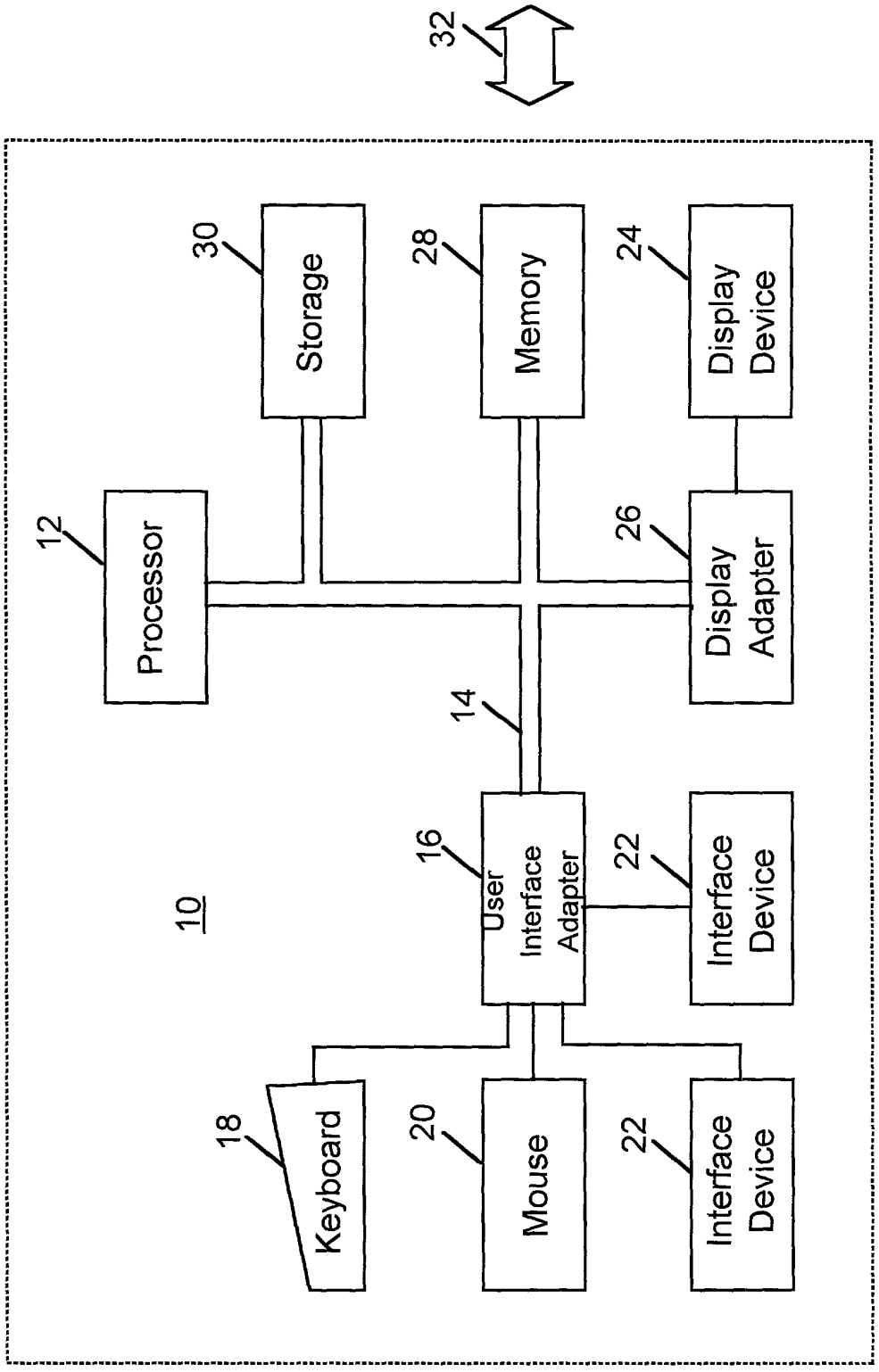
FIG. 1


32
10
12
Processor
30
Storage
28
Memory
24
Display Device
26
Display Adapter
14
16
User Interface Adapter
22
Interface Device
18
Keyboard
20
Mouse
22
Interface Device

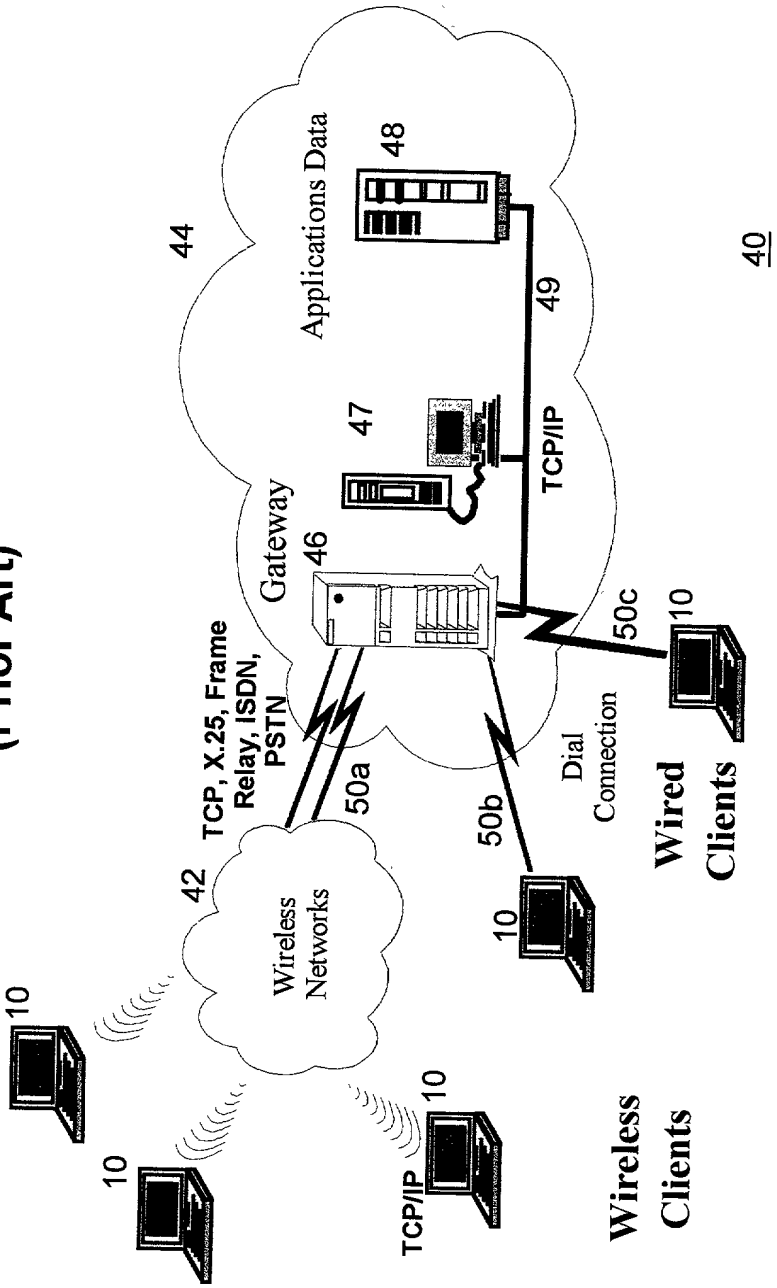


FIG. 2
(Prior Art)

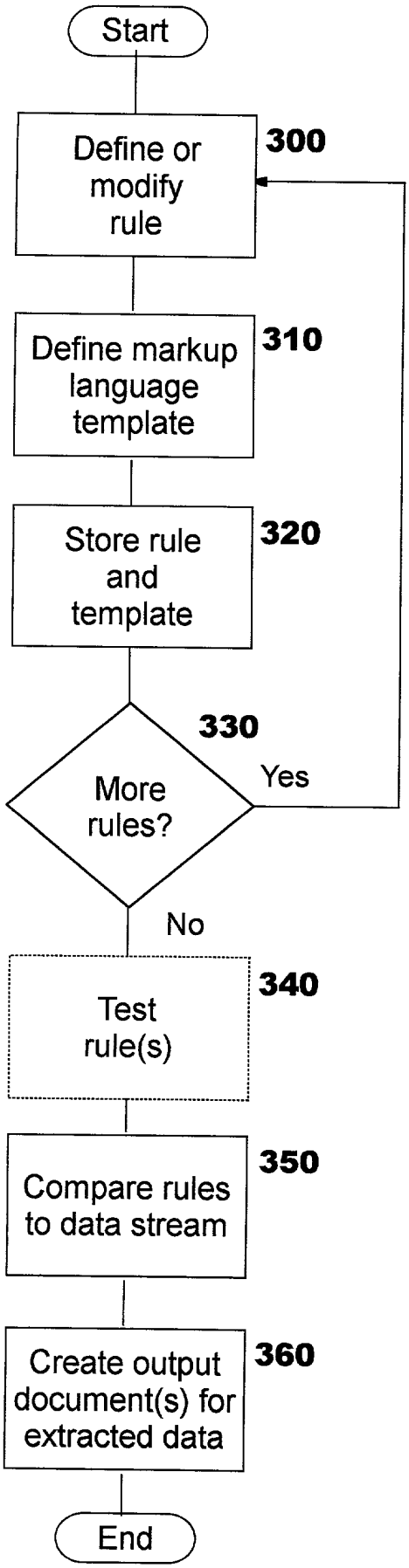

Start
Define or modify rule
300
Define markup language template
310
Store rule and template
320
More rules?
330
Yes
No
Test rule(s)
340
Compare rules to data stream
350
Create output document(s) for extracted data
360
End

FIG. 3

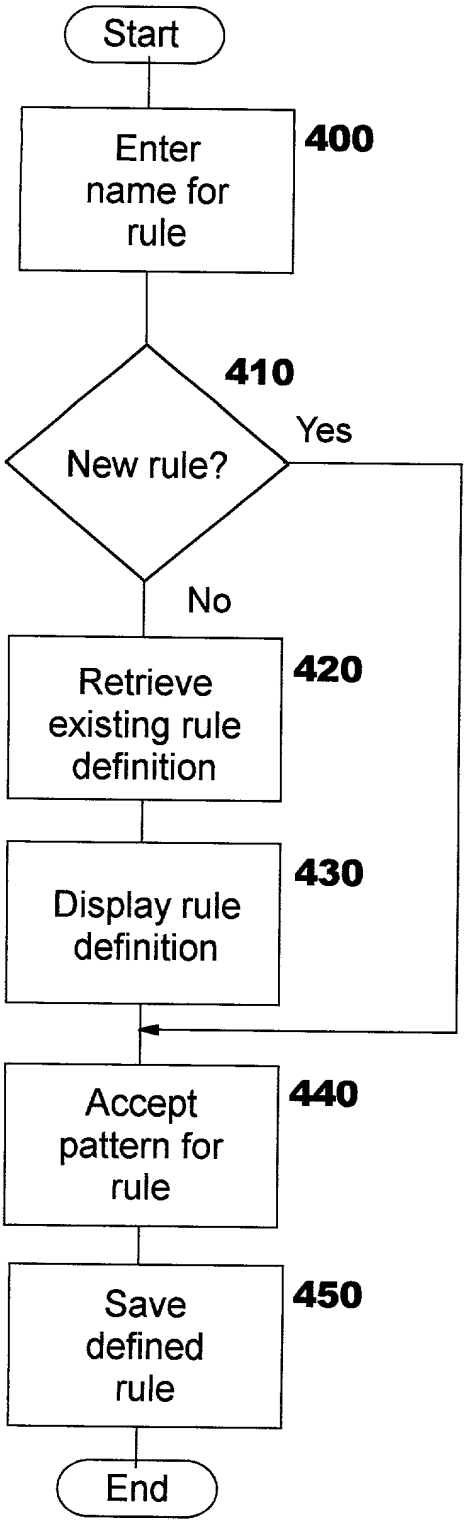
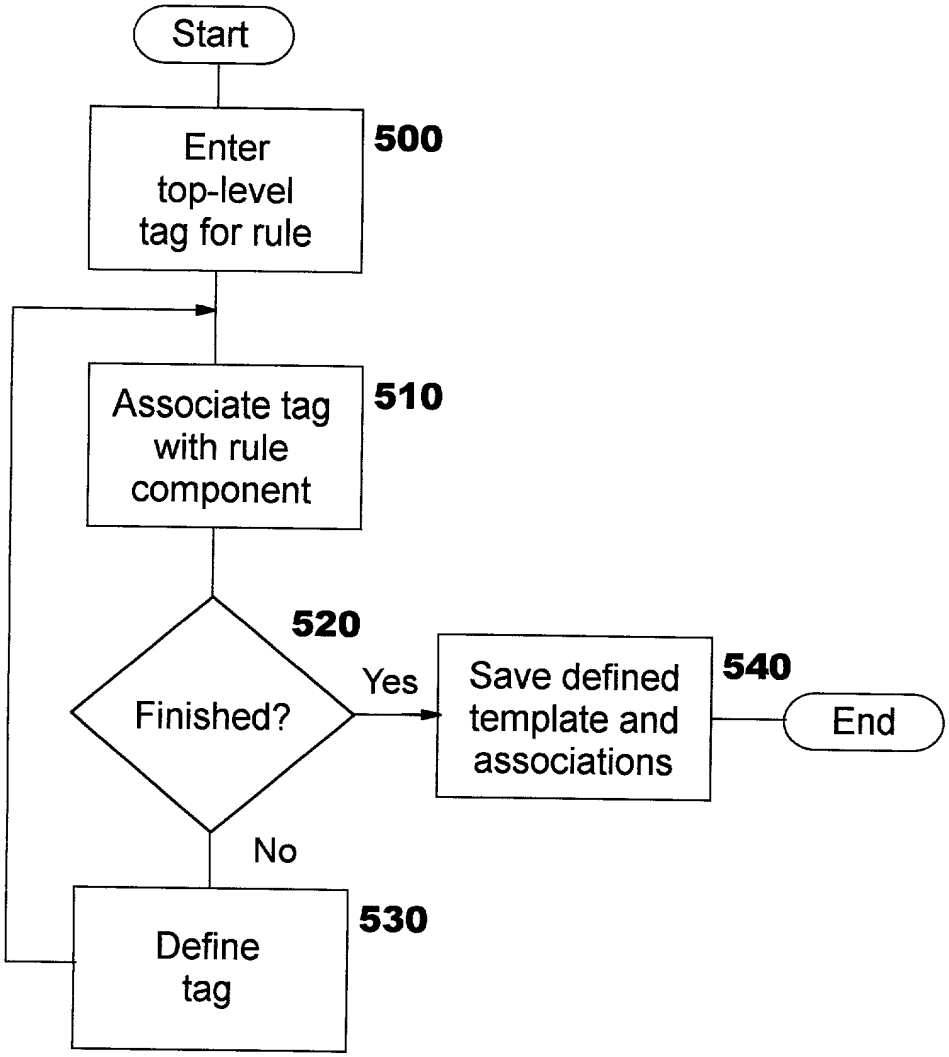

Start
Enter name for rule
400
410
New rule?
Yes
No
Retrieve existing rule definition
420
Display rule definition
430
Accept pattern for rule
440
Save defined rule
450
End

FIG. 4

FIG. 5


Start
Enter top-level tag for rule
500
Associate tag with rule component
510
520
Finished?
Yes
Save defined template and associations
540
End
No
Define tag
530

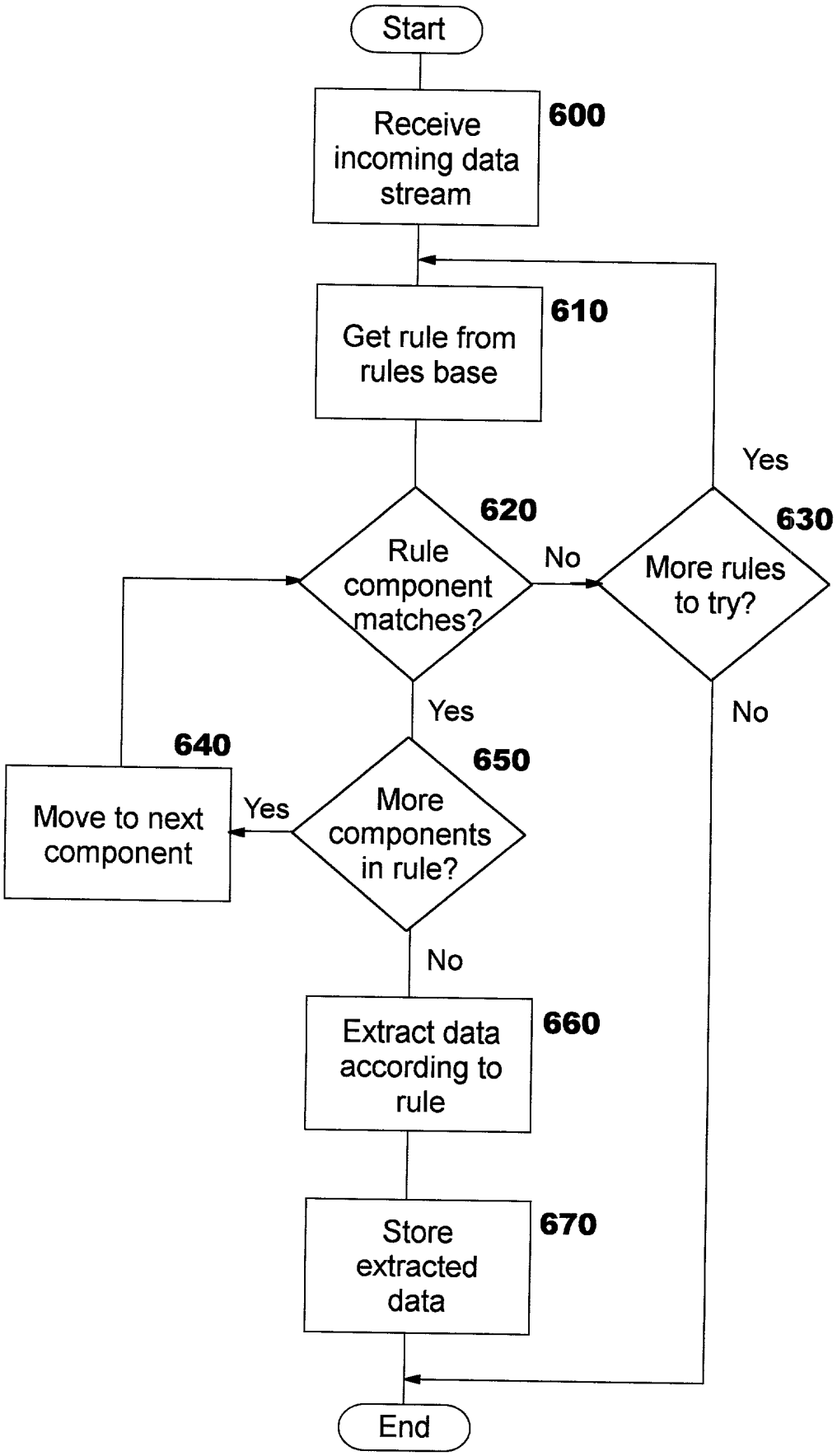
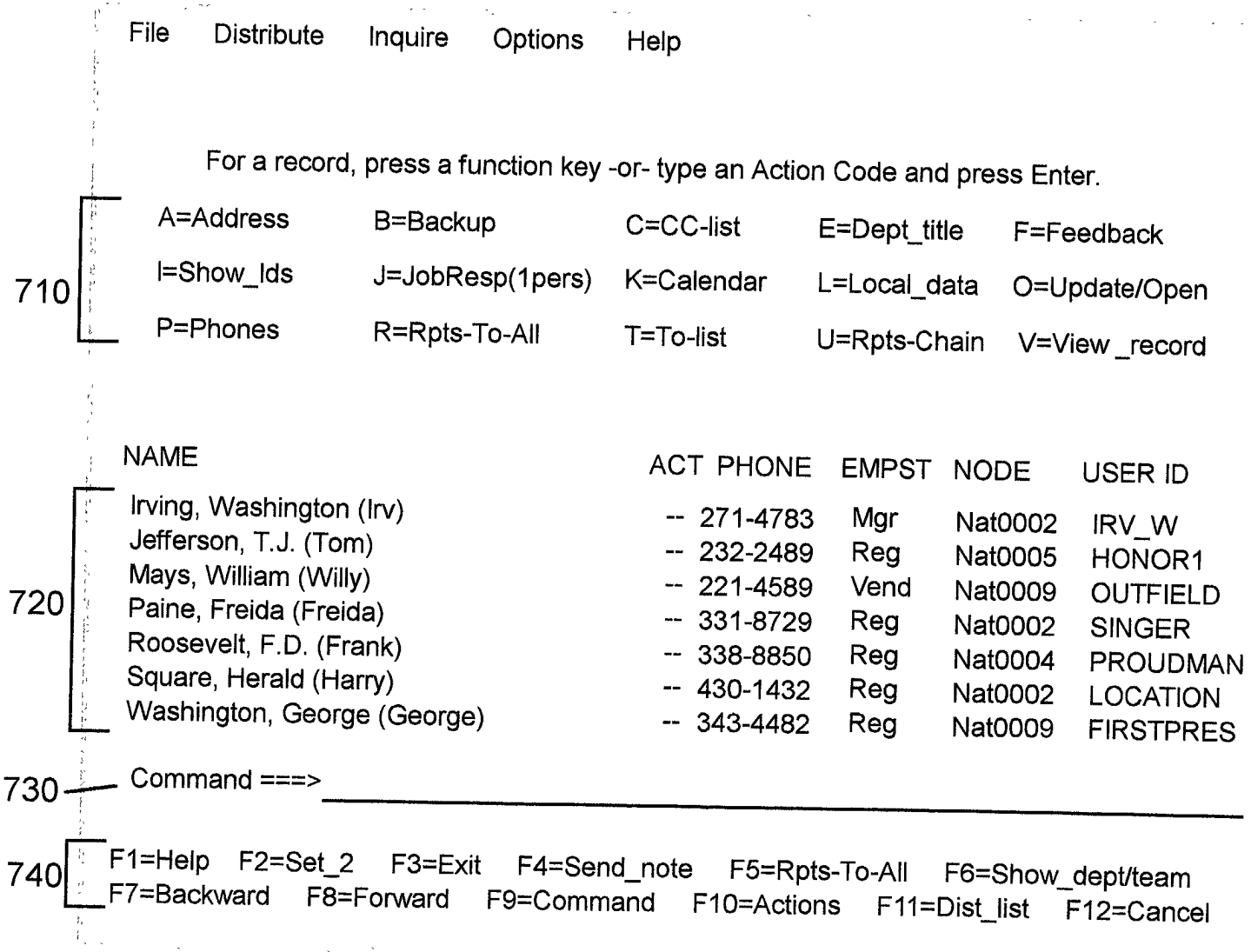

Start
Receive incoming data stream
600
Get rule from rules base
610
Rule component matches?
620
No
More rules to try?
630
Yes
Yes
No
Move to next component
640
Yes
More components in rule?
650
No
Extract data according to rule
660
Store extracted data
670
End

FIG. 6

FIG. 7
(Prior Art)



TOSOTO" 2964526O

FIG. 8

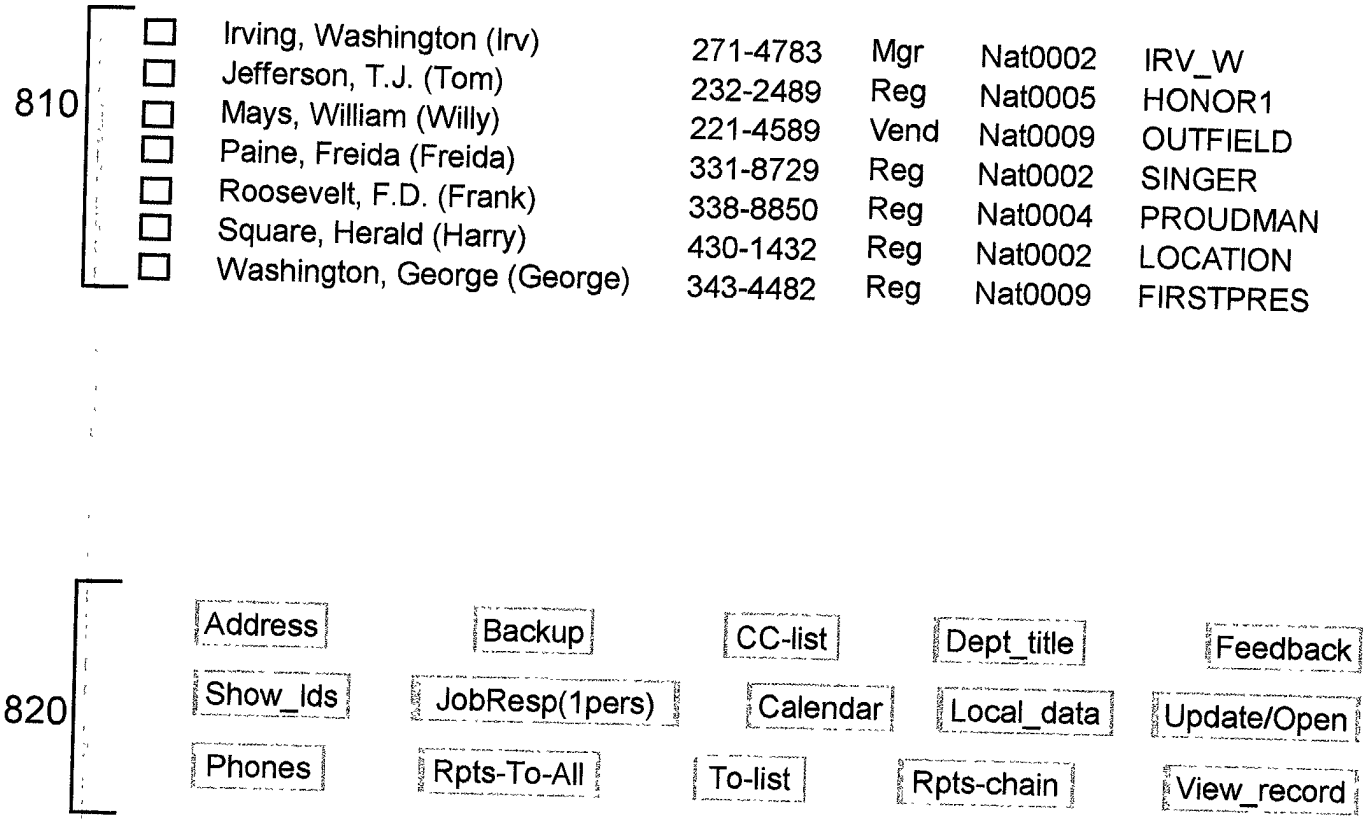


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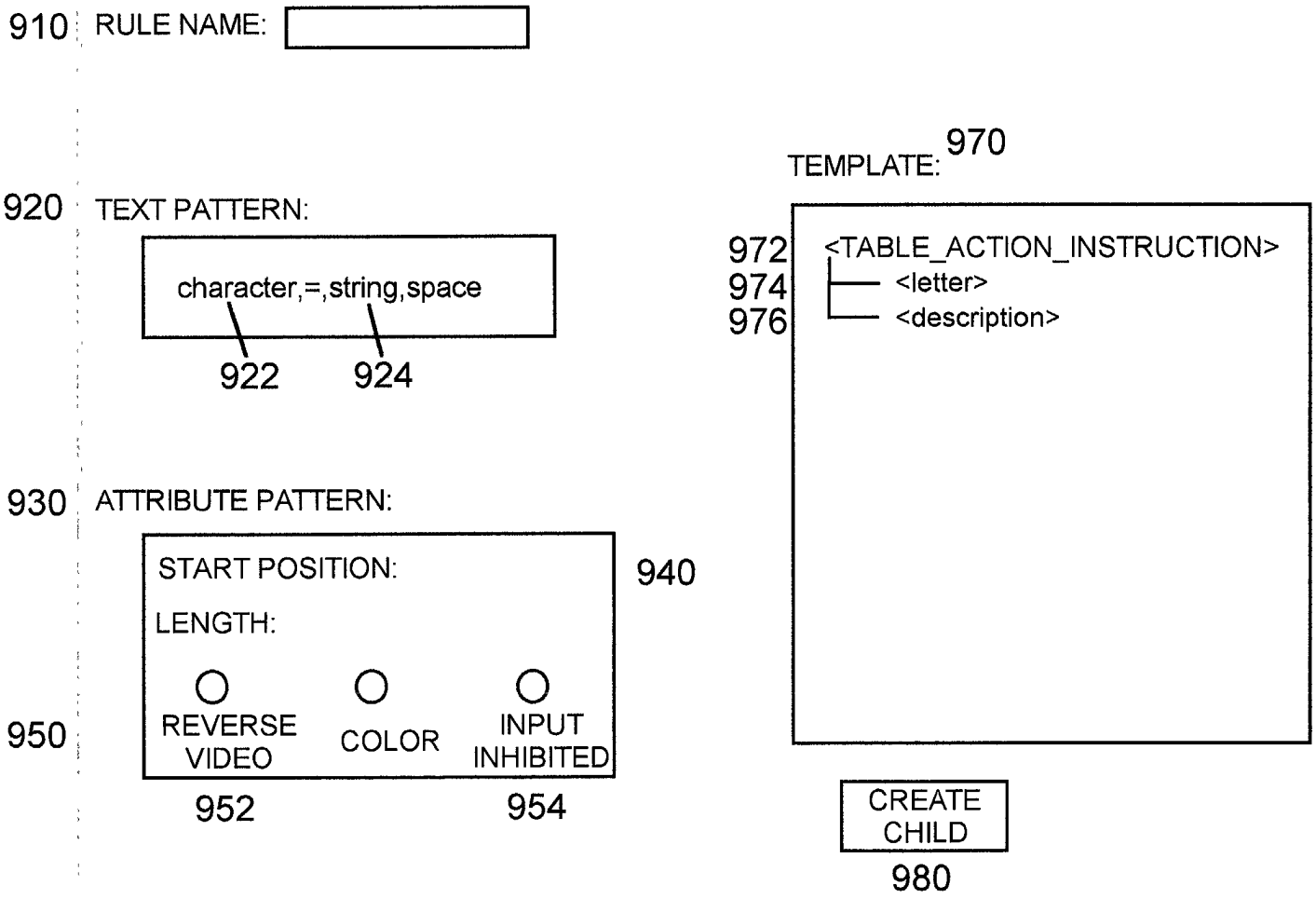
FIG. 9



FORM PTO-1449 (REV. 7-80)

FIG. 10

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<xml_host_components> <CustomExtractResults>
<TABLE_ACTION_INSTRUCTION>
        <letter>A</letter>
        <description>Address</description>
</TABLE_ACTION_INSTRUCTION>
<TABLE_ACTION_INSTRUCTION>
        <letter>B</letter>
        <description>Backup</description>
</TABLE_ACTION_INSTRUCTION>
<TABLE_ACTION_INSTRUCTION>
        <letter>C</letter>
        <description>CC-list</description>
</TABLE_ACTION_INSTRUCTION>
<TABLE_ACTION_INSTRUCTION>
<letter>E</letter>
<description>Dept_title</description>
</TABLE_ACTION_INSTRUCTION> ...
```

FIG. 11A

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<xml_host_data>
 <session>
  <id type="1">VMZRGRAAAAAACCJFGA4QAAA</id>
  <description>    </description>
  <host port="23">ralvms</host>
  <size>2</size>
  <codepage>037</codepage>
  <reconnect>true</reconnect>
 </session>
 <screen cursor="1">
  <content>
   <field position="1" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
   <field position="2" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
   <field position="4" length="4" protected="false" numeric="false" hidden="false" reset="false" modified="false">File</field>
   <field position="8" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
   <field position="10" length="10" protected="false" numeric="false" hidden="false" reset="false"
        modified="false">Distribute</field>
   <field position="20" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
   <field position="22" length="7" protected="false" numeric="false" hidden="false" reset="false" modified="false">Inquire</field>
   <field position="29" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
   <field position="31" length="7" protected="false" numeric="false" hidden="false" reset="false" modified="false">Options</field>
   <field position="38" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
   <field position="40" length="4" protected="false" numeric="false" hidden="false" reset="false" modified="false">Help</field>
   <field position="45" length="35" protected="true" numeric="true" hidden="false" reset="false"
        modified="false">                                    </field>
   <field position="80" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
   <field position="160" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
```

FIG. 11B

```
<field position="240" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="242" length="78" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">                                                                    </field>
<field position="320" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="322" length="78" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">For a record, press a function key -or- type an Action Code and press Enter.  </field>
<field position="400" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="401" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="403" length="77" protected="true" numeric="true" hidden="false" reset="false"
      modified="false"> A=Address  B=Backup       C=CC-list  E=Dept_title  F=Feedback       </field>
<field position="480" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="481" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="483" length="77" protected="true" numeric="true" hidden="false" reset="false"
      modified="false"> I=Show_Ids  J=JobResp(1pers)  K=Calendar  L=Local_data  O=Update/Open      </field>
<field position="560" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="561" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="563" length="77" protected="true" numeric="true" hidden="false" reset="false"
      modified="false"> P=Phones  R=Rpts-To-All  T=To-list  U=Rpts-Chain  V=View_record      </field>
<field position="640" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="642" length="56" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">                                                  </field>
<field position="720" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="722" length="53" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">                                                  </field>
```

FIG. 11C

```
<field position="960" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="962" length="35" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">NAME                                    </field>
<field position="997" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="999" length="3" protected="true" numeric="true" hidden="false" reset="false" modified="false">ACT</field>
<field position="1003" length="8" protected="true" numeric="true" hidden="false" reset="false"
     modified="false">PHONE</field>
<field position="1012" length="28" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">EMPST  NODE    USER ID </field>
<field position="1040" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1042" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Irving, Washington (Irv)          </field>
<field position="1080" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1081" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1083" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">271-4783</field>
<field position="1092" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Mgr   Nat0002 IRV_W   </field>
<field position="1120" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1122" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Jefferson, T.J. (Tom) </field>
<field position="1160" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
```

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FIG. 11D

```
<field position="1161" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1163" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">232-2489</field>
<field position="1172" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Reg   Nat0005 HONOR1</field>
<field position="1200" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1202" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Mays, William (Willy) </field>
<field position="1240" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1241" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1243" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">221-4589</field>
<field position="1252" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Vend   Nat0009 OUTFIELD  </field>
<field position="1280" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1282" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Paine, Freida (Freida)   </field>
<field position="1320" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1321" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1323" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">331-8729</field>
<field position="1332" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Reg   Nat0002 SINGER</field>
<field position="1360" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1362" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Roosevelt, F.D. (Frank)    </field>
<field position="1400" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1401" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1403" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">338-8850</field>
```

FIG. 11E

```
<field position="1412" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Reg   Nat0004 PROUDMAN</field>
<field position="1440" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1442" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Square, Herald (Harry)    </field>
<field position="1480" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1481" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1483" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">430-1432</field>
<field position="1492" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Reg   Nat0002 LOCATION</field>
<field position="1520" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
 <field position="1522" length="37" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Washington, George (George)   </field>
<field position="1560" length="1" protected="false" numeric="false" hidden="false" reset="false" modified="false"> </field>
<field position="1561" length="0" protected="true" numeric="true" hidden="false" reset="false" modified="false"></field>
<field position="1563" length="8" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">343-4482</field>
<field position="1572" length="28" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">Reg   Nat0009 FIRSTPRES</field>
<field position="1600" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1602" length="78" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">                                                                </field>
<field position="1680" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
<field position="1682" length="12" protected="true" numeric="true" hidden="false" reset="false"
      modified="false">Command ===&gt;</field>
<field position="1695" length="65" protected="false" numeric="false" hidden="false" reset="false"
      modified="false">_________________________________________________________________</field>
<field position="1760" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
```

FIG. 11F

```
    <field position="1762" length="78" protected="true" numeric="true" hidden="false" reset="false"
          modified="false">F1=Help  F2=Set_2  F3=Exit  F4=Send_note  F5=Rpts-To-All  F6=Show_dept/team  </field>
     <field position="1840" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
     <field position="1842" length="78" protected="true" numeric="true" hidden="false" reset="false"
          modified="false">F7=Backward  F8=Forward  F9=Command  F10=Actions  F11=Dist_list  F12=Cancel  </field>
     <field position="1920" length="0" protected="true" numeric="false" hidden="false" reset="false" modified="false"></field>
 </content>
  <interaction/>
  </screen>
</xml_host_data>
```